

VEX Robotics Accessibility Conformance Report

WCAG Edition

(Based on VPAT® Version 2.5)

Name of Product: VEXcode 123 / GO / IQ / EXP / V5 / VR

Platform: Web-Based VEXcode

Version: Continual Release

Report Date: January 13, 2025

Product Description: Coding Software for VEX Robotics Products

Contact Information: support@vexrobotics.com

Evaluation Methods Used: Manual testing.

Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines (Some of the WCAG 2.2 criteria have also been considered):

Standard/Guideline	Included In Report
Web Content Accessibility Guidelines 2.1	Level A Level AA

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Partially Supports:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can only be used in WCAG Level AAA criteria.

Table 1: Success Criteria, Level A

Criteria	Conformance Level	Remakes and Explanations
1.1.1 Non-text Content (Level A)	Partially Supports	Secondary controls for actions like settings and help, do not have labels.
1.2.1 Audio-only and Video-only (Prerecorded) (Level A)	Not Applicable	There is no audio-only or video-only media.
1.2.2 Captions (Prerecorded) (Level A)	Supports	All of the videos in VEXcode contain captions.
1.2.3 Audio Description or Media Alternative (Prerecorded) (Level A)	Supports	All of the videos in VEXcode contain alternative text versions, such as captions that describe the action.
1.3.1 Info and Relationships (Level A)	Does Not Support	The applications depend on the location/structure of the content to provide context.
1.3.2 Meaningful Sequence (Level A)	Not Applicable	VEXcode is a block-based programming environment in which its content is designed to be visually organized rather than sequentially structured.
1.3.3 Sensory Characteristics (Level A)	Partially Supports	There are some key elements that do not have labels.
1.4.1 Use of Color (Level A)	Supports	Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
1.4.2 Audio Control (Level A)	Supports	A mechanism is available to pause or stop the audio and to control audio volume independently from the overall system volume level.
2.1.1 Keyboard (Level A)	Partially Supports	The application requires a mouse or touch input for controlling most of the programming aspects. There are keyboard shortcuts to some of the functionalities and keyboard navigation inside the block-based programming environment.
2.1.2 No Keyboard Trap (Level A)	Partially Supports	There are still instances where the user is still trapped without a mouse click.
2.1.4 Character Key Shortcuts (Level A 2.1 and 2.2)	Not Applicable	VEXcode does not provide character key shortcuts.

2.2.1 Timing Adjustable (Level A)	Not Applicable	VEXcode does not include time limits.
2.2.2 Pause, Stop, Hide (Level A)	Supports	VEXcode allows user to pause, stop, or hide any moving, blinking and scrolling,
2.3.1 Three Flashes or Below Threshold (Level A)	Supports	VEXcode is below the general flash and red flash thresholds.
2.4.1 Bypass Blocks (Level A)	Not Applicable	VEXcode is a single page application. There is no “skip to content” link.
2.4.2 Page Titled (Level A)	Not Applicable	VEXcode is a single page application. There is only one page title.
2.4.3 Focus Order (Level A)	Partially Supports	Not all focusable inputs can be selected in order. Additionally, some inputs are not focusable such as the port selection inputs when configuring a device.
2.4.4 Link Purpose (In Context) (Level A)	Supports	All links in VEXcode have text content or associated labels.
2.5.1 Pointer Gestures (Level A 2.1 and 2.2)	Partially Supports	The user cannot use a single mouse click to drop in blocks. The user can not monitor a variable with a single click.
2.5.2 Pointer Cancellation (Level A 2.1 and 2.2)	Partially Supports	The drag and drop events can be canceled only if the released area is not a suitable droppable area.
2.5.3 Label in Name (Level A 2.1 and 2.2)	Partially Supports	Some icons like the coding, monitoring, and help icons do not have a label in name.
2.5.4 Motion Actuation (Level A 2.1 and 2.2)	Not Applicable	VEXcode does not contain any motion operations.
3.1.1 Language of Page (Level A)	Supports	The default human language of VEXcode can be programmatically determined.
3.2.1 On Focus (Level A)	Partially Supports	The application does not change context when a component receives focus, However, some additional information may be displayed on focus. There are also places where invalid inputs will be reset on loss of focus.
3.2.2 On Input (Level A)	Partially Supports	There are several input fields that validate user input while values are being entered. If the value is invalid,

		focus loss can reset the value or will prevent submitting the change
3.2.6 Consistent Help (Level A 2.2 only)	Supports	The online help button stays at the same location across the site.
3.3.1 Error Identification (Level A)	Partially Supports	Most input errors are prevented in the first place by limiting open ended inputs. The few inputs that are open, have validation checks, and will display the error under the text input. For a number input in the oval shape, the only error indication is the background color, without any text.
3.3.2 Labels or Instructions (Level A)	Partially Supports	A few inputs have no labels and are not clear to the user that they are even an input
3.3.7 Redundant Entry (Level A 2.2 only)	Supports	VEXcode supports redundant entry patterns.
4.1.1 Parsing (Level A)	Supports	WCAG 2.0 and 2.1 – Always answer ‘Supports’
4.1.2 Name, Role, Value (Level A)	Partially Supports	The application generates the interface based on internal data states.

Table 2: Success Criteria, Level AA

Criteria	Conformance Level	Remakes and Explanations
1.2.4 Captions (Live) (Level AA)	Not Applicable	VEXcode doesn't support live video or audio.
1.2.5 Audio Description (Prerecorded) (Level AA)	Partially Supports	The tutorial video does have subtitles, but does not have a second more-detailed audio track. Video scripts do narrate the activity on screen.
1.3.4 Orientation (Level AA 2.1 and 2.2)	Not Applicable	VEXcode only supports landscape mode as the particular display orientation is essential to the software.
1.3.5 Identify Input Purpose (Level AA 2.1 and 2.2)	Does Not Support	The input cannot be determined programmatically
1.4.3 Contrast (Minimum) (Level AA)	Supports	The visual presentation of text and images of text has a contrast ratio of at least 4.5:1.

Criteria	Conformance Level	Remakes and Explanations
1.4.4 Resize text (Level AA)	Partially Supports	After scaling, part of the UI will be blocked by the zoom effect.
1.4.5 Images of Text (Level AA)	Partially Supports	There are images in the integrated help documents that are not essential, and none of them can be customized.
1.4.10 Reflow (Level AA 2.1 and 2.2)	Supports	VEXcode can be resized without loss of content or functionality.
1.4.11 Non-text Contrast (Level AA 2.1 and 2.2)	Partially Supports	The block image in the help document will not change in the high-contrast theme nor the picture of the tutorial video.
1.4.12 Text Spacing (Level AA 2.1 and 2.2)	Supports	VEXcode meets all the text spacing requirements without loss of content or functionality.
1.4.13 Content on Hover or Focus (Level AA 2.1 and 2.2)	Supports	Any additional information displayed on hover or focus remains visible until dismissed.
2.4.5 Multiple Ways (Level AA)	Not Applicable	VEXcode is a single page application, thus is not applicable to multiple ways.
2.4.6 Headings and Labels (Level AA)	Supports	Headings and labels describe topic or purpose.
2.4.7 Focus Visible (Level AA)	Supports	Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.
2.4.11 Focus Not Obscured (Minimum) (Level AA 2.2 only)	Supports	When a user interface component receives keyboard focus, the component is not entirely hidden due to author-created content.
2.5.7 Dragging Movements (Level AA 2.2 only)	Partially Supports	The user can use keyboard navigation to insert and break blocks as an alternative for some of the dragging movement.
2.5.8 Target Size (Minimum) (Level AA 2.2 only)	Supports	The size of the target for pointer inputs is at least 24 by 24 CSS pixels.

Criteria	Conformance Level	Remakes and Explanations
3.1.2 Language of Parts (Level AA)	Supports	The human language of each passage or phrase in the content can be programmatically determined.
3.2.3 Consistent Navigation (Level AA)	Not Applicable	VEXcode is a single page application. There is no navigation.
3.2.4 Consistent Identification (Level AA)	Not Applicable	VEXcode is a single page application. There are no additional pages.
3.3.3 Error Suggestion (Level AA)	Supports	If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user.
3.3.4 Error Prevention (Legal, Financial, Data) (Level AA)	Not Applicable	VEXcode doesn't collect any user data nor cause legal commitment or financial transaction.
3.3.8 Accessible Authentication (Minimum) (Level AA 2.2 only)	Supports	A cognitive function test is not required for any step.
4.1.3 Status Messages (Level AA 2.1 and 2.2)	Does Not Support	The system is not supported with ARIA code.

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